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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,759	02/24/2004	Amir Abolfathi	AT-000220	2843

7590 12/27/2006  
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EXAMINER

BUMGARNER, MELBA N

ART UNIT PAPER NUMBER

3732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.



## Office Action Summary

Application No.

10/786,759

Applicant(s)

ABOLFATHI ET AL.

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 34-45 is/are pending in the application.
- 4a) Of the above claim(s) 34-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Newly submitted claims 34-39 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Although there were article claims to an appliance that were cancelled, the new claims are to an appliance with first and second portions of the arch expander and an expansion member that appear to be distinct from the earlier claims which include shell or polymeric material.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 34-39 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Objections***

2. Claim 40 is objected to because of the following informalities: “patent’s” should read – patient’s--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 40-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Recitation of “the palate” in claim 40 lacks sufficient antecedent basis. There is no first portion of the arch expander to have the second in claim 40. It is unclear if “for receiving posterior teeth on one side of the palate” is includes each of the portions, whether “at

least one digital image that capture at least some of the patient's teeth" is different from what is acquired, and what is meant by "a successive tooth arrangement of the plurality of cavities".

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 40-45 are rejected as understood, under 35 U.S.C. 103(a) as being unpatentable over Truax et al. in view of Pavloskaia et al. (6,463,344). Truax et al. disclose a method for making an appliance and expanding a palatal arch of a patient comprising acquiring a digital (computerized optical) scan representing the mouth of the patient (column 5 line 44), fabricating a first portion 58 of an appliance and fabricating a second portion 60, the first and second portions each having a plurality of cavities capable of receiving posterior teeth and a palatal portion extending toward a centerline of the palate, the plurality of cavities to receive the posterior teeth, to secure the appliance, and to reposition teeth, coupling an expansion member 48 between the first and second portions, placing the arch expander in the mouth, and adjusting the expansion member to vary the spacing between the first and second portions to expand the palatal arch and reposition teeth; however, they do not show digital imaging. Pavloskaia et al. teach a method for making dental appliances comprising digital visualization of dental scans. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Truax et al. to include the step of Pavloskaia et al. in order to enhance the treatment of a patient by simplifying and improving making of an appliance as well

as saving money and time as taught by Pavloskaia et al. Pavloskaia et al. show the appliance fabricated using stereolithography (column 12 line 24), and acquiring the scan comprising taking an impression of the patient's teeth, placing the impression in a scanner and generating a 3-D model (column 4 line 36), and compression of data associated with the 3-D model. It is known to one of ordinary skill in the art that the physical impression of the teeth of a patient is taken by the treating professional to whom the patient goes.

#### ***Response to Arguments***

7. Applicant's arguments filed October 5, 2006 have been fully considered but they are not persuasive. The prior art show the steps of method of as understood and claimed. It is shown that the posterior teeth are repositioned outwardly in expanding the palatal arch.

#### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Melba Bumgarner". The signature is fluid and cursive, with a large initial "M" and a long, sweeping underline.

Melba Bumgarner  
Primary Examiner